

1 IN THE CLAIMS:

2 Please amend the claims as follows:

- 3 1. Withdrawn
- 4 2. Withdrawn
- 5 3. Withdrawn
- 6 4. Previously Withdrawn
- 7 5. Withdrawn
- 8 6. Withdrawn
- 9 7. Withdrawn
- 10 8. Withdrawn
- 11 9. Previously Withdrawn
- 12 10. Withdrawn
- 13 11. Withdrawn
- 14 12. Withdrawn
- 15 13. (Previously Amended)

16 In a harvester for vine crops, such as tomatoes, wherein the vines are severed near ground  
17 level and removed from the ground with severing means, where the harvester has a wheel-  
18 mounted frame having a forward end, a rear end, a right side, a left side and a center,  
19 means for moving said harvester forwardly in a field, pickup means adjacent said forward  
20 end for picking up crops and attached vines from the field and carrying the crops and vines  
21 rearwardly and upwardly, and separating means for separating crops from the vines, an  
22 improved separating means comprising:

- 23 (a) a drum housing;
- 24 (b) a drum assembly disposed within the drum housing, the drum assembly  
25 comprising: (i) a drum having a first end and a second end, the first and  
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1 second end defining a longitudinal axis oriented transverse to the travel  
2 direction of the harvester, and a multiplicity of tines extending radially  
3 from the outer peripheral surface of the drum; (ii) a first shaft extending  
4 through the drum; (iii) a first weight housing adjacent and coupled to the  
5 first end, the first shaft extending through the first weight housing; (iv) a  
6 second weight housing adjacent and coupled to the second end; (v) a first  
7 hydraulic motor coupled to the first shaft; and (vi) a second hydraulic motor  
8 for rotating the drum connected to the second weight housing with a spring  
9 coupling, the spring coupling comprising a plurality of springs disposed  
10 between two end plates, the end plates on either side of a center plate which  
11 supports the first shaft; and  
12 (c) a plurality of stationary rods mounted adjacent to the tines of the drum such  
13 that the tines pass through the stationary rods as the drum rotates.

14 14. (Original)

15 The improved separating means of claim 13, wherein the first weight housing and the  
16 second weight housing each comprise: (i) a plurality of weight shafts secured within each  
17 weight housing; (ii) a plurality of eccentrically mounted weights mounted on the weight  
18 shafts; (iii) transmission means connecting the first shaft to the weight shafts in the weight  
19 housings for rotating the eccentrically mounted weights mounted therein.

20 15. (Original)

21 The improved separating means of claim 14 wherein the transmission means comprise a  
22 first sheave mounted on the first shaft coupled to the weight shafts of the first weight  
23 housing with belts and a second sheave mounted on the first shaft coupled to the weight  
24 shafts of the second weight housing with belts.

25 16. (Original)

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1       The improved separating means of claim 14, wherein the total weight of the eccentrically  
2       mounted weights is in excess of 450 pounds.

3   17.   (Original)

4       The improved separating means of claim 13, wherein the angular velocity of the drum  
5       does not exceed 200 revolutions per minute.

6   18.   (Previously Amended)

7       In a harvester for vine crops, such as tomatoes, wherein the vines are severed near ground  
8       level and removed from the ground with severing means, where the harvester has a wheel-  
9       mounted frame having a forward end, a rear end, a right side, a left side and a center,  
10       means for moving said harvester forwardly in a field, and pickup means adjacent said  
11       forward end for picking up crops and attached vines from the field and carrying the crops  
12       and vines rearwardly and upwardly, and separating means for separating crops from the  
13       vines, improvements to the harvester comprising:

14       (a)   the pickup means comprising: a plurality of ground-engaging conveyors  
15               comprising a central conveyor and an outrigger conveyor, the central conveyor and  
16               outrigger conveyor extending from the forward end of the harvester, each conveyor  
17               having a bottom end and a top end, a cutter attached at the bottom end;

18       (b)   the separating means comprising:

19               (i)   a drum housing;

20               (ii)  a drum assembly disposed within the drum housing, the drum assembly  
21                       comprising: (1) a drum having a first end and a second end, the first and  
22                       second end defining a longitudinal axis oriented transverse to the travel  
23                       direction of the harvester, and a multiplicity of tines extending radially  
24                       from the outer peripheral surface of the drum; (2) a first shaft extending  
25                       through the drum; (3) a first weight housing adjacent and coupled to the  
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1 first end, the first shaft extending through the first weight housing; (4) a  
2 second weight housing adjacent and coupled to the second end; (5) a first  
3 hydraulic motor coupled to the first shaft; and (6) a second hydraulic motor  
4 for rotating the drum connected to the second weight housing with a spring  
5 coupling, the spring coupling comprising a plurality of springs disposed  
6 between two end plates the end plates on either side of a center plate which  
7 supports the first shaft; and  
8 (iii) a plurality of stationary rods mounted adjacent to the tines of the drum such  
9 that the tines pass through the stationary rods as the drum rotates.

10 19. (Original)

11 The harvester of claim 18 wherein the wherein the first weight housing and the second  
12 weight housing each comprise: (i) a plurality of weight shafts secured within each weight  
13 housing; (ii) a plurality of eccentrically mounted weights mounted on the weight shafts;  
14 (iii) transmission means connecting the first shaft to the weight shafts in the weight  
15 housings for rotating the eccentrically mounted weights mounted therein.

16 20. (Original)

17 The harvester of claim 19 wherein the transmission means comprise a first sheave  
18 mounted on the first shaft coupled to the weight shafts of the first weight housing with  
19 belts and a second sheave mounted on the first shaft coupled to the weight shafts of the  
20 second weight housing with belts.

21 21. (Original)

22 The harvester of claim 19, wherein the total weight of the eccentrically mounted weights is  
23 in excess of 450 pounds.

24 22. (Original)

25 The harvester of claim 19, wherein the angular velocity of the drum does not exceed 200  
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1 revolutions per minute.

2 23. (Previously Amended)

3 In a harvester for vine crops, such as tomatoes, wherein the vines are severed near ground  
4 level and removed from the ground with severing means, where the harvester has a wheel-  
5 mounted frame having a forward end, a rear end, a right side, a left side and a center,  
6 means for moving said harvester forwardly in a field, and pickup means adjacent said  
7 forward end for picking up crops and attached vines from the field and carrying the crops  
8 and vines rearwardly and upwardly, and separating means for separating crops from the  
9 vines, improvements to the harvester comprising:

10 (a) the pickup means comprising: a plurality of ground-engaging conveyors  
11 comprising a central conveyor and an outrigger conveyor, the central conveyor and  
12 outrigger conveyor extending from the forward end of the harvester, each conveyor  
13 having a bottom end and a top end, a cutter attached at the bottom end, the  
14 outrigger conveyor pivotally attached to the central conveyor such that the  
15 outrigger conveyor may be pivoted from a first position with the outrigger  
16 conveyor in the same relative position as the central conveyor, to a second position  
17 with the outrigger conveyor at approximately a right angle to the central conveyor;

18 (b) the separating means comprising:

19 (i) a drum housing;

20 (ii) a drum assembly disposed within the drum housing, the drum assembly  
21 comprising: (1) a drum having a first end and a second end, the first and  
22 second end defining a longitudinal axis oriented transverse to the travel  
23 direction of the harvester, and a multiplicity of tines extending radially  
24 from the outer peripheral surface of the drum; (2) a first shaft extending  
25 through the drum; (3) a first weight housing adjacent and coupled to the  
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1 first end, the first shaft extending through the first weight housing; (4) a  
2 second weight housing adjacent and coupled to the second end; (5) a first  
3 hydraulic motor coupled to the first shaft; and (6) a second hydraulic motor  
4 for rotating the drum connected to the second weight housing with a spring  
5 coupling, the spring coupling comprising a plurality of springs disposed  
6 between two end plates the end plates on either side of a center plate which  
7 supports the first shaft; and  
8 (iii) a plurality of stationary rods mounted adjacent to the tines of the drum such  
9 that the tines pass through the stationary rods as the drum rotates.

10 24. (Original)

11 The harvester of claim 23 wherein the wherein the first weight housing and the second  
12 weight housing each comprise: (i) a plurality of weight shafts secured within each weight  
13 housing; (ii) a plurality of eccentrically mounted weights mounted on the weight shafts;  
14 (iii) transmission means connecting the first shaft to the weight shafts in the weight  
15 housings for rotating the eccentrically mounted weights mounted therein.

16 25. (Original)

17 The harvester of claim 24 wherein the transmission means comprise a first sheave  
18 mounted on the first shaft coupled to the weight shafts of the first weight housing with  
19 belts and a second sheave mounted on the first shaft coupled to the weight shafts of the  
20 second weight housing with belts.

21 26. (Original)

22 The harvester of claim 24, wherein the total weight of the eccentrically mounted weights is  
23 in excess of 450 pounds.

24 27. (Original)

25 The harvester of claim 24, wherein the angular velocity of the drum does not exceed 200  
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1 revolutions per minute.

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